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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,483	04/15/2005	Patrice Bujard	SE/2-22782/PCT	8659
324 7590 10/29/2007 CIBA SPECIALTY CHEMICALS CORPORATION PATENT DEPARTMENT 540 WHITE PLAINS RD P O BOX 2005 TARRYTOWN, NY 10591-9005			EXAMINER LE, HOA T	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 10/29/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/531,483		BUJARD, PATRICE	
	Examiner		Art Unit	
	H. T. Le		1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) 9, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 13-17 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>July 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because part of the disclosure is illegible: line 4 on almost every page is illegible because of the transverse white mark. Appropriate correction is required.

Election/Restrictions

2. Applicant's election with traverse of claims 1, 6, 8, 9, 11, 13, 15, 18, 19, 21 and 22 in the reply filed on September 25, 2007 is acknowledged. The traversal is on the ground(s) that all claims should be allowable if claim 1 is found allowable.

This is found persuasive with the exception of claims 9, 18 and 19 for reasons set forth below.

3. Claims 9, 18 and 19 do not share the special feature of a layer comprising metal and SiO_z as required in other claims. Rather claims 9, 18 and 19 recite two separate layers comprising a metal layer and a SiO_z layer in a structure. This feature of claims 9, 18 and 19 is not inventive as admitted by Applicant on page 1, lines 14-16 of the present specification. Here, Applicant admits that metal flakes of SiO_y next to a metal layer, wherein y= 1 to 2 and metal=aluminum, have been disclosed in WO00/34395, WO00/69975 and WO02/31058.

4. Accordingly, claims 9, 18 and 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-7, 11, 13-17, 20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, "(B)" is unclear. It is suggested that claim is amended to identify (B) as "layer (B)".

In claim 4, "high" in "high index of refraction" renders the claim indefinite because "high" is a relative term. The term "high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In claim 5, it is unclear whether the specific material "TiO₂" followed a broader limitation "high index of refraction" is part of the claim scope. A broad limitation together with a narrow limitation that falls within the broad limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10

USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not

Art Unit: 1794

required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

Further, in claim 5, it is suggested that "B" be changed to "layer (B)" for clarity. Also "high" is a relative term and renders the claim indefinite (see reasons set forth in the rejection to claim 4 above).

Other claims are deemed indefinite in view of their dependency upon claim 1.

Claim Rejections - 35 USC § 102/103

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-8, 11, 13-17, and 20-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over '098 Coulter et al. (US 6,586,098).**

Claim 1: '098 Coulter teaches a pigment comprising a central layer (i.e. layer B) located between a reflector layer (layer A) and a protective layer (layer C). See '098 Coulter, col. 6, lines 20-27 and 43-49. The central layer consists of silicon monoxide or silicon dioxide (col. 7, lines 29-32) and metal (col. 7, lines 44-54). Thus, the central layer comprises the same materials as the claimed layer (B); that is SiO_z and metal, when $z=1$ (silicon monoxide) and $z=2$ (silicon dioxide). With regard to the calcination of the layer, the claims are product-by-process claims, thus the determination of patentability is based on the product itself. *"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."* In re Thorpe 777 F.2d 695, 698, 227 USPQ 964,966 (Fed Cir. 1985) and MPEP 2113. In the alternative, it would have been obvious to select silicon monoxide or silicon dioxide for the central layer because '098 Coulter teaches that silicon monoxide and silicon dioxide are suitable as materials in the central layer of the pigment. One of ordinary skill in the art would expect that silicon oxide would perform as well as other materials that are described as suitable as material for the central layer of the pigment taught by '098 Coulter.

Claim 2: '098 Coulter teaches a pigment comprising a central layer located between a reflector layer and a protective layer. See '098 Coulter, col. 6, lines 20-27 and 43-49. The central layer comprises metal and SiO_z as discussed in the rejection of claim 1.

Art Unit: 1794

The protective layer comprises the same material as the central layer (col. 8, lines 40-42) which includes silicon monoxide or silicon dioxide (col. 7, lines 29-32). Thus the protective layer is equivalent to the claimed layer (C) when $z=1$ (silicon monoxide) or $z=2$ (silicon dioxide).

Claim 3: The protective layers are surrounded the central layer (col. 6, lines 42-49) and comprises the same material as the central layer (col. 8, lines 40-42) which includes silicon monoxide or silicon dioxide (col. 7, lines 29-32). Thus the protective layers are equivalent to the claimed layers (C1) and (C2) when $z=1$ (silicon monoxide) or when $z=2$ (silicon dioxide).

Claim 4: A high refractive index (RI) layer is disclosed on col. 12, lines 35-38.

Claim 5: See rejection to claims 1-4 above. TiO_2 as the material for the high RI layer is taught on col. 12, lines 35-40.

Claim 6: Suitable metals in the reflector layer (A) and/or central layer (B) of the pigment include Ag, Al, Cu, Cr, Ni, Ti. See col. 8, lines 5-15.

Claim 7: '098 Coulter teaches a pigment comprising a central layer located between a reflector layer and a protective layer. See '098 Coulter, col. 6, lines 20-27 and 43-49.

The central layer comprises metal and SiO_2 as discussed in the rejection of claim 1.

The protective layer comprises the same material as the central layer (col. 8, lines 40-42) which includes silicon monoxide or silicon dioxide (col. 7, lines 29-32). Thus the protective layer is equivalent to the claimed layer (C) when $z=1$ (silicon monoxide) or $z=2$ (silicon dioxide). The protective layers are surrounded the central layer (col. 6, lines 42-49) and comprises the same material as the central layer (col. 8, lines 40-42) which

includes silicon monoxide or silicon dioxide (col. 7, lines 29-32). Thus the protective layers are equivalent to the claimed layers (C1) and (C2) when $z=1$ (silicon monoxide) or when $z=2$ (silicon dioxide). An additional high refractive index (RI) layer is disclosed at col. 12, lines 35-38, and TiO_2 as the material for the high RI layer is taught at col. 12, lines 35-40. The reflector layer (A) is formed on the plane-parallel surfaces of the central layer, but not on the sides (col. 6, lines 61-64). The high reflective index layer is applied to the whole surface, i.e. "substantially surround or encapsulate", (col. 12, lines 33-37). See also Figures 1B, 1C and 2B.

Claim 8: '098 Coulter teaches a pigment comprising a central layer (B) located between a reflector layer (A). See '098 Coulter, col. 6, lines 20-27 and 43-49. The central layer consists of silicon monoxide or silicon dioxide (col. 7, lines 29-32) and metal (col. 7, lines 44-54). Thus, the central layer comprises the same materials as the claimed layer (B); that is SiO_z and metal, when $z=1$ (silicon monoxide) and $z=2$ (silicon dioxide). The reflector layer (A) comprises metal (col. 8, lines 5-15). With regard to the calcination of the layer, the claims are product-by-process claims, thus the determination of patentability is based on the product itself. *"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."* In re Thorpe 777 F.2d 695, 698, 227 USPQ 964,966 (Fed Cir. 1985) and MPEP 2113.

Claim 11: See col. 16, lines 25-28.

Claims 13 and 14: See rejection to claims 1 and 2.

Claims 15 and 16: See rejections to claims 1-3. An additional high refractive index (RI) layer is disclosed on col. 12, lines 35-38. TiO₂, carbon, and silicon carbide as suitable materials for the high RI layer are taught on col. 12, lines 35-49.

Claim 17: See rejection to claim 5.

Claims 20-22: See col. 16, lines 25-28.

10. Other references are cited as art of interest.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511.

The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. Thi Le/
H. (Holly) T. Le
Primary Examiner
Art Unit 1794

October 25, 2007